

METHOD AND SYSTEM FOR VERSION
CONTROL IN A FAULT TOLERANT SYSTEM

ABSTRACT OF THE INVENTION

5 A method and system for performing software versioning between multiple
controllers in a fault tolerant system. The fault tolerant system includes a storage
system and multiple redundant controllers that provide access to the storage
system. The storage system has stored thereon a preferred version of software to
be used by the controllers. This software may be updated. The controllers each
contain non-volatile memory. On boot, a controller compares the software version
10 in its non-volatile memory to the preferred version in the storage system. If they are
different (e.g., the software on the storage system was updated or the controller
was updated with a non-preferred software version), then the controller copies the
storage system version into its non-volatile memory and then re-boots. One
controller is typically left operational while the other is re-booted for redundancy.
15 Computer controlled versioning allows (1) lockstep software updates between the
controllers based on a software version that may be associated with the storage
system as a whole and (2) provides a central store from which the controllers may
obtain the preferred software version. A special flash update mechanism is also
described with respect to an implementation that uses flash memory as the non-
20 volatile memory.